

**Growth response of Rubber (*Hevea brasiliensis*)
seedlings to different dosage of inorganic fertilizer**

A dissertation submitted to the
Faculty of Animal Science and Export Agriculture
Uva Wellassa University
In partial fulfillment of the requirements for the award of
Bachelor of Science in Palm & Latex Technology and Value Addition

By
Conganeege Gebriyal Vinishiya Antony

**BACHELOR OF SCIENCE IN PALM & LATEX TECHNOLOGY
AND VALUE ADDITION
FACULTY OF ANIMAL SCIENCE AND EXPORT
AGRICULTURE
UVA WELLASSA UNIVERSITY**

2019

ABSTRACT

Rubber cultivation in Sri Lanka has been confined in the past mainly to the Wet Zone where the extent of land under rubber declined rapidly with urbanization. Therefore, to meet the demand for natural rubber, cultivation has been extended to Uva Province too in the Intermediate Zone. High quality budded plants are need to be produced in the region but the time taken for that is comparatively little longer than in the Wet Zone. This study was conducted in the government rubber nursery at Monaragala to examine the effectiveness of different dosages of inorganic fertilizer and compost on the growth of rubber nursery plants. Fertilizer mixture: 9:11:11:4 for N:P:K:Mg, respectively, recommended by the Rubber Research Institute was used. Three levels of fertilizer mixture: 1.25 (control), 2.5, and 3.7 g per plant at fortnight interval were applied. Two levels of compost: 0 and 50 g per plant were used for the potting mixture with topsoil. Compost and fertilizer levels were considered as two factors (4 replicates and 25 plants per replicate) and a nursery was arranged as a complete randomized block design. Germinated seeds were transplanted into polybags which were filled with two potting media. Growth attributes *viz.* stem height, stem diameter and number of leaves were recorded at the 2nd, 3rd, 4th, 6th and 7th weeks; and chlorophyll content (SPAD), number of leaf whorls at the 7th week after transplanting. Data were subjected to ANOVA. There was no significant difference ($P>0.05$) in the growth attributes as well as in the SPAD value among the treatments tested. Therefore, use of currently recommended lowest dosage of the fertilizer mixture, *i.e.* 1.25 g per plant at fortnight interval is cost effective in maintaining the rubber nurseries at pre bud grafting period in the Intermediate Zone of Uva Province.

Keywords: Compost, Hevea seedlings, Inorganic fertilizer, Intermediate zone